BASF Corporation

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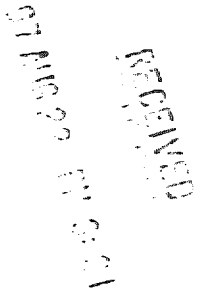
August 19, 1997



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Attention: (8e) Coordinator
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

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Ladies and Gentlemen:

Subject: Notice in Accordance to TSCA Section 8(e) - Results of an acute inhalation study and acute aquatic toxicity of BAS 090 00 S (CAS No. 68002-96-0, fatty alcohol ethoxylate propoxylate).

BASF Corporation is submitting the results of an acute inhalation toxicity study as a liquid aerosol in rats and an acute aquatic toxicity LC_{50} on the rainbow trout (Oncorhynchus mykiss WALBAUM 1792), of BAS 090 00 S, conducted by BASF Aktiengesellschaft, Ludwigshafen, Germany.

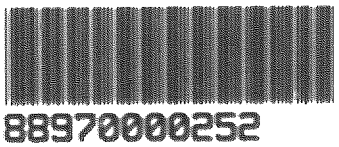
The following results were obtained in the acute inhalation study:

For determination of the acute inhalation toxicity (single 4-hour exposure) of BAS 090 00 S as a liquid aerosol, a study in male and female Wistar rats was performed according to OECD Guideline method 403, as well as the EEC and EPA guidelines. The following concentrations were tested: 0.094, 0.26, 0.59 and 5.5 mg/l). No mortality occurred at the low and low intermediate concentrations. All females and 4/5 males died at 0.59 and all animals died at 5.5 mg/l. The LC_{50} for male and female animals was estimated to be 0.26 - 0.59 mg/l.

Cascade impactor measurements revealed particle size distributions with mass median aerodynamic diameters (MMADs) between 0.1 and 0.7 µm, which are in a respirable range. In the low concentration, clinical examination revealed irregular, accelerated and intermittent respiration, as well as attempts to escape, smeared fur and piloerection. In the low-intermediate concentration, respiratory sounds, unconsciousness and squatting posture were also observed. No clinical signs could be detected from study day 7 onward. The high-intermediate and the high concentrations resulted generally in the same symptoms, with death occurring during or shortly after exposure. In the single surviving animals of the high-intermediate concentration group no clinical signs were detected from day 7 onward.

Body weight development of the male animals was not influenced at the low concentration. Body weight development in the low concentration females, the low-intermediate concentration animals of both sexes and the surviving male animals of the high-intermediate concentration was slightly depressed in the first post exposure week but recovered in the second.

During necropsy, animals that died showed agonal congestive hyperemia and dark red discoloration of the lung. One animal of the high-intermediate concentration showed moderate hyperemia of the glanular stomach. No macroscopic pathologic findings were noted in animals examined at the end of the study.



The following results were obtained in the acute study on the rainbow trout (static procedure):

The determination of the acute toxicity on the rainbow trout was performed following the OECD 203 Guideline (adopted April 4, 1984, considering the updated version, adopted July 1992), using a static system. This guideline also covers the requirements of the EEC Directive 84/449, c.1:"Acute toxicity for fish", including the updated version of Nov. 1989 (Doc, 89/86/IX).

Ten fish per concentration or control were used; the study duration was about 96 hours (=4 days). The test temperature was 12-13° C; the water hardness was about 2.5 mol/l. The test compound was soluble in the test water in the range of the selected concentrations.

Analytical concentration control analyses were performed at the two highest concentrations. After about 96 hours a recovery of 95.5 % - 97.3% was achieved. The lower concentrations were below the detection limit of the analytical method.

The exposure to nominal BAS 090 00 S concentrations of 0; 0.0464; 0.10; 0.215; 0.464 and 1.0 mg/l resulted in the following:

LC_{50} (96 hours) = >0.1 - <0.22 mg/l
NOEC (96 hours) = 0.1 mg/l
"LC_0" (96 hours) = 0.1 mg/l
"LC_{100}" (96 hours) = 0.22 mg/l

Toxic symptoms observed were apathy. These values indicate that BAS 090 00 S exerts relatively high acute toxicity for fish according to current criteria for TSCA 8(e) submission.

Although these findings are not considered to be unexpected, because the test article belongs to the class of fatty alcohol alkoxylates, members of which are known to produce marked lung and thus inhalation toxicity as well as acute fish toxicity. BASF Corporation understands that the reporting of these study results is in accordance with EPA's policy.

All Material Safety Data Sheets will be updated with these results. Any reports or additional information that we receive will be forwarded to the Agency.

If you have any questions, please feel free to call me at (313) 246-6207.

Very Truly Yours,

BASF Corporation

Edward J. Kerfoot

Edward J. Kerfoot, Ph.D.
Director, Toxicology and Product Regulations